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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,756	12/15/2005	Takatoshi Tsujimura	JP920010371US1	4741
32074 7590 05/02/2008 INTERNATIONAL BUSINESS MACHINES CORPORATION DEPT. 18G BLDG. 300-482 2070 ROUTE 52 HOPEWELL JUNCTION, NY 12533				
EXAMINER ARENA, ANDREW OWENS				
ART UNIT 2811		PAPER NUMBER		
MAIL DATE 05/02/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,756

Applicant(s)

TSUJIMURA ET AL

Examiner

Andrew O. Arena

Art Unit

2811

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7, 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date IDS dated 4/23/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-7 and 10 are rejected under 35 U.S.C. § 102(e) as anticipated by Yu (US 7,098,060).

RE claim 1, Yu discloses an organic light emitting diode device (col 1 ln 11-14), comprising (e.g., Fig 1E):

a substrate (10; col 4 ln 46);

a first electrode (20; col 4 ln 47) formed on the substrate;

an organic electroluminescent function layer (50, 56, 58; col 5 ln 5 & ln 20-24) formed on the substrate;

a trench wall pattern (30; col 4 ln 47) formed adjacently to the function layer; and

a second electrode layer (60; col 5 ln 25) formed on the function layer and the trench wall pattern,

wherein a doping concentration in the function layer (56, 58) under (not above) a wall (30 between 56 and 58) forming the trench pattern is lower than in other portions of the function layer (50 is doped less than 56 and 58, col 5 ln 1-24).

RE claim 2, Yu discloses the function layer (50, 56, 58) contains one of polymer and oligomer, each having an amine derivative structure (col 8 lns 11, 16 & 36).

RE claim 3, Yu discloses different types of dopant are contained in areas of the function layer (col 5 ln 5 & ln 20-24), the areas (50, 56, 58) being adjacent to each other while being spaced by a wall (30) of the trench pattern.

RE claim 5, Yu discloses a method for manufacturing an organic light emitting diode device (col 1 ln 11-14), the method comprising the steps of (e.g. Fig 1A-1E):

forming a first electrode (20; col 4 ln 46-47) on a substrate (10);

forming an organic electroluminescent function layer (50/56/58; col 5 ln 5, 20-24) on the electrode;

forming a trench pattern (between walls 30, col 4 ln 47) on said organic electroluminescent function layer;

performing doping for the function layer by supplying a dopant solution along the trench pattern (col 5 ln 11-16); and

forming a second electrode layer (60; col 5 ln 25) formed on the function layer and the trench pattern.

RE claim 6, Yu discloses forming a trench pattern includes the steps of:

forming a photoresist layer on the function layer; and

patterning the photoresist layer to form the trench pattern (col 4 ln 57-58).

RE claim 7, Yu discloses introducing, along the trench pattern, at least a second function layer (70) having a composition (col 5 ln 57-64, col 8 ln 58 - col 9 ln 13) different from a composition of the function layer (col 8 ln 10-17).

RE claim 10, Yu discloses the step of performing doping includes the step of supplying different types of dopant into areas of the function layer, the areas being spaced by a wall of the trench pattern (Fig 1C; col 5 ln 12-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being obvious in view of Yu.

Re claim 9, Yu discloses the step of performing doping for the function layer by supplying a dopant solution includes the steps of:

supplying the dopant solution along the trench pattern (col 5 ln 12-16); and
dispersing the dopant into the function layer (Fig 1C-1D).

Yu differs from the claimed invention only in not explicitly disclosing the manner by which said dispersing is effected.

However, heating is one of the most well known methods of dispersing, or enhancing the dispersion of, dopants, in the art.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made that said dispersing included dispersing by heating the function layer; at least to facilitate the uniform incorporation therein of the dopants.

Allowable Subject Matter

The indicated allowability of claim 6 is withdrawn in view of the amendment. Yu discloses using conventional photolithography techniques to form the wall (col 4 ln 57), which is encompassed by the currently presented claim language, which does not require that the photoresist layer remains or actually is part of the trench pattern.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of time extension per 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew O. Arena whose telephone number is 571-272-5976. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne A. Gurley can be reached on 571- 272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more info about PAIR, see <http://pair-direct.uspto.gov>. For questions PAIR access, contact the Electronic Business Center at 866-217-9197 (toll-free). For assistance from a USPTO Customer Service Rep or access to the automated info system, call 800-786-9199 or 571-272-1000.

/Andrew O. Arenal/
Examiner, Art Unit 2811
14 April 2008

/Lynne A. Gurley/
Supervisory Patent Examiner,
Art Unit 2811